

NEW ORLEANS FORECAST DISTRICT.

During the first three weeks the areas of high pressure that appeared in the Northwest and passed eastward or dissipated were not of sufficient intensity to cause a general break in the period of hot, dry weather that prevailed in most interior sections of the western and central portions of the district.

The most important area of high pressure appeared on the 21st and its southward advance over the district terminated the drought and was attended by a period of comparatively cool weather.

Conditions were favorable during the month for frequent showers in the coast section of Louisiana.

No storm warnings were issued or required.—*R. A. Dyke.*

DENVER FORECAST DISTRICT.

No low pressure areas of importance affected the district during the month, and the temperature was considerably below the normal for August throughout the district. The month was characterized by a large number of high-pressure areas on the eastern slope, most of which moved southward from the Canadian Northwest, resulting in frequent showers and much cloudy weather in eastern Colorado. At Denver the number of rainy days was 16, being the greatest recorded at Denver in August since the year 1875.

No special warnings were issued or required.—*Frederick W. Brist.*

SAN FRANCISCO, FORECAST DISTRICT.

The only warnings issued during August were for a spell of warm weather on the 6th and for rain on the 20th. The first applied to northern California, and while warm weather prevailed for several days, it did not become as warm as expected.

The special rain warning was issued to only a few places in the counties just north of San Francisco, and it was fully verified. Many prunes were being dried in the sun in this part of the State at this time, and the warnings were received early enough to enable the growers to stack their trays, and thus protect the fruit from injury.

The principal feature of the month was the presence of a low off the north California coast that first appeared on the 11th, and it persisted till the end of the month. It moved every day, sometimes coming closer to the coast and other times retreating farther westward. Also at times it would move some distance to the north and again to the south. On the 16th it was quite close to the Washington coast, and a portion evidently became detached from the parent storm and crossed the Rocky Mountains on the 19th, causing showers in scattered places in the northern portion of this district on one or two days.

Another portion of the Gulf of Alaska low moved inland on the 21st, and in consequence good rains fell for two or three days in the North Pacific States, and unsettled weather prevailed in the northern half of California. The pressure was also relatively low over Bering Sea during practically the entire month.—*E. A. Beals.*

RIVERS AND FLOODS.

By H. C. FRANKENFIELD, Meteorologist.

Stages in nearly all rivers of the country indicated the approach of the annual low-water season that usually reaches its culmination in late autumn. Floods occurred

in only a few rivers, and they were very moderate and of little consequence. Over the Saluda and Santee drainage areas of South Carolina rains were frequent and heavy, and the rivers were above the average mean stage for August, with floods occurring at the close of the month in both rivers. Warnings were issued at the proper time and no losses were reported, as no crops had been planted in the lowlands on account of continued high water. Stages were also quite high at the same time in the interior rivers of Georgia, but there were no floods. The usual advices were issued.

Moderate to heavy rains fell over the drainage area of the upper Arkansas River about the middle of the month, and flood warnings were issued for all points from La Junta, Colo., to Mulvane, Kans. Flood stages were exceeded at Fort Lyon, Colo., and Dodge City, Kans., with crests of 8.6 feet, or 2.6 feet above flood stage, at Fort Lyon on the 22d, and of 5.8 feet, or 0.8 foot above flood stage, at Dodge City on the 24th.

Among the losses in Colorado was that of an irrigation reservoir dam on the Apishapa River, a tributary of the Arkansas, resulting in an estimated damage of \$697,000, while the estimated value of property saved by the warnings was placed at \$200,000. In Kansas the total losses amounted to \$44,860, of which \$28,500 was in crops, in hand and prospective. Erosion of abutting lands caused losses of about \$10,000.

A destructive summer flood occurred near the middle of the month in northern Utah, and following will be found a report thereon, prepared by Mr. J. Cecil Alter, Meteorologist in Charge of the Weather Bureau Office at Salt Lake City, Utah:

FLOODS AT FARMINGTON AND WILLARD, UTAH.

Local thundershowers at dusk, Monday evening, August 13, 1923, along the west slope of the Wasatch Mountains in northern Utah, produced the most intense downpour of record in the Salt Lake City rain gage, with unusually heavy rains at a few other places near the foot of the mountains, and sent the most destructive floods of record in the State, consisting largely of earth and rocks, out of the steep canyons at Farmington and Willard, 16 and 50 miles, respectively, north of Salt Lake City. Nine human lives were destroyed, and the loss at Farmington and Willard is estimated at from \$105,000 to \$120,000.

The storm, which gathered slowly during the late afternoon without exceptional manifestations of wind, lightning, or other phenomena, occurred in connection with a shallow, circular low charted over southern Idaho and northern Utah that morning, but which formed an arm from southeastern Wyoming to a Mississippi valley low 24 hours later. The heavy rains were rather local, however, little or none falling over Great Salt Lake and the western part of the Salt Lake (City) valley, while stations in the Wasatch Mountains received less rain than stations along the base of the range.

Descending onto the business section of Salt Lake City, street elevation about 4,300 feet above the sea, at 6:38 p. m., new records for rainfall intensity were established as follows: In 5 minutes (6:53 to 6:58) 0.35 inch, 10 minutes 0.56 inch, 15 minutes 0.76 inch, 30 minutes 1.05 inches, 1 hour 1.17 inches, and 2 hours 1.23 inches, this being the total for the storm, and a new 24-hour record for August. In the minute ending at 6:55 p. m. 0.10 inch fell, this probably being a new record; sprinkles preceded and followed the rain for some time. At the University of Utah, 2 miles due east, elevation 4,500